

VIETTEL MILITARY INDUSTRY AND TELECOM GROUP

**VIETTEL TELECOM**

**SINVOICE**

**TECHNICAL DOCUMENTATION FOR INTEGRATION**

**Ha Noi, 09/2018**

TABLE OF CONTENT

[TABLE OF CONTENT 2](#_Toc42187471)

[1 Terminology and abbreviations 4](#_Toc42187472)

[2 Purpose and scope 4](#_Toc42187473)

[3 The connection model 4](#_Toc42187474)

[4 The standards 6](#_Toc42187475)

[4.1 Date 6](#_Toc42187476)

[4.2 Data 6](#_Toc42187477)

[4.3 Special characters 7](#_Toc42187478)

[4.4 Duplicate transactions solution 7](#_Toc42187479)

[4.5 Connection security standards 7](#_Toc42187480)

[5 Specification of invoiced input 8](#_Toc42187481)

[5.1 Overview 8](#_Toc42187482)

[5.1.1 generalInvoiceInfo 9](#_Toc42187483)

[5.1.2 sellerInfo 13](#_Toc42187484)

[5.1.3 buyerInfo 15](#_Toc42187485)

[5.1.4 extAttribute 18](#_Toc42187486)

[5.1.5 payments 18](#_Toc42187487)

[5.1.6 itemInfo 19](#_Toc42187488)

[5.1.7 taxBreakdowns 27](#_Toc42187489)

[5.1.8 summarizeInfo 29](#_Toc42187490)

[5.1.9 metadata 31](#_Toc42187491)

[5.1.10 meterReading 33](#_Toc42187492)

[6 Function description 34](#_Toc42187493)

[6.1 The concept 34](#_Toc42187494)

[6.2 Issue / replace / adjust invoice (For HSM digital certificates) 35](#_Toc42187495)

[6.3 Webservice gets the invoice file 37](#_Toc42187496)

[6.4 Webservice gets the invoice file Portal. 39](#_Toc42187497)

[6.5 Webservice gets converted invoice(pdf) 42](#_Toc42187498)

[6.6 Webservice cancels invoice. 44](#_Toc42187499)

[6.7 Webservice searchs invoice. 46](#_Toc42187500)

[6.8 Web service metadata 51](#_Toc42187501)

[6.9 Webservice draft invoicing. 55](#_Toc42187502)

[6.10 Webservice batch invoicing. 56](#_Toc42187503)

[6.11 Webservice updates Tax declaration. 57](#_Toc42187504)

[6.12 Webservice provides using invoice status 59](#_Toc42187505)

[6.13 Webservice gets invoice list in period. 61](#_Toc42187506)

[6.14 Webservice sends email to customer. 62](#_Toc42187507)

[6.15 Webservice invoicing signing with USB token 64](#_Toc42187508)

[6.16 Webservice inserts signature to USB token 67](#_Toc42187509)

[6.17 Convert font 68](#_Toc42187510)

[6.18 Update payment status 69](#_Toc42187511)

[6.19 Cancel payment status 71](#_Toc42187512)

[6.20 Preview draft invoice 72](#_Toc42187513)

[6.21 Find invoices by transactionUuid 73](#_Toc42187514)

[7 List of system error returns 74](#_Toc42187515)

[8 Mapping between information fields and invoice forms 74](#_Toc42187516)

# Terminology and abbreviations

|  |  |  |
| --- | --- | --- |
| **No** | **Abbreviations** | **Meaning** |
| **1** | **XML** | e**X**tensible **M**arkup **L**anguage |
| **2** | **VAN** | **T**axation **V**alue **A**dded **N**etwork |
| **3** | **ICC** | **I**nvoice **C**ertification **C**enter |
| **4** | **PSD** | **P**ortable **S**ecurity **D**evice |
| **5** | **SGML** | **S**tandard **G**eneralized **M**arkup **L**anguage |
| **6** | **W3C** | **W**orld **W**ide **W**eb **C**onsortium |
| **7** | **SInvoice** | Viettel's electronic invoice service / system |
| **8** | **HTTH** | Accounting and business management software system integrated with SInvoice system to issue invoices |

Purpose and scope

Describe in detail the connection standard so that the systems can connect to Viettel's Mass Electronic Invoice service to ensure the correct release of information.

The connection model

The connection model between external system and Sinvoice:



The role of Sinvoice system are receiving invoice data from outside and issued as invoice form that selected by the enterprise. The SInvoice System APIs are provided under the Restful Webservice standard, which supports both XML and Json.

Firstly, the enterprise performed the operation of declaring the invoice form on the website of SInvoice system including:

* Declare invoice type
* Choose invoice form
* Declare invoice serials
* Create notification of using invoice
* Register CA information

**Some basic streams**

After filling out all the information, the enterprise can go through the external system to call the API to:

* **Simple stream**
* Release/exchange/adjust invoice (***Refer to Section 6.2***)
* Cancel invoice (***Refer to Section 6.6***)
* Download invoice file (***Refer to Section 6.3***)
* Search invoice (***Refer to Section 6.7***)
* Save draft invoice (***Refer to Section 6.9***)
* **Special stream (Information other than the standard declarations in section 5. Eg water and electricity, hospitals, seaports, import and export ....)**
* Get a metadata list (***Refer to Section 6.2***)
* Release/exchange/adjust invoice (***Refer to Section 6.2***)
* Cancel invoice (***Refer to Section 6.6***)
* Download invoice file (***Refer to Section 6.3***)
* Search invoice (***Refer to Section 6.7***)
* Save draft invoice (***Refer to Section 6.9***)

**Note 1:** *Invoicing uses HSM digital signatures and USB tokens using different functions. HSM uses a unique function, the interaction with the signature is done by the Electronic Invoice system. USB uses 2 different functions, the interaction with the signature is done by the integrated software. Customers should be consulted before use.*

**Note2:** *A business may have multiple tax codes (business, branch), invoice form, invoice symbols. Therefore, integrated systems must allow businesses to configure a lot of information to send to SInvoice.*

Standards

## Date

The time zone of SInvoice system is GMT + 7, in case of sending UNIX time to UTC, the system will automatically switch to GMT + 7 (plus 7 hours at the base time)

* C#:

Format: yyyy-MM-ddTHH:mm:sszzz

Ex: 2009-06-15T08:45:30+07:00

* Java:

Format: yyyy-MM-dd'T'HH:mm:ssZ

Ex: 2019-02-10T23:46:53+07:00

* Date-only format:

Format: yyyy-MM-dd

Ex: 2019-03-06

* Other languages may specify times as follows:

Using UNIX time standard: is the system describing a point in time. Unix time is defined as the number of seconds since 00:00:00 Coordinated Universal Time (UTC) on January 1, 1970, minus leap seconds. Up to milliseconds

Ex: 1551872514000

Note: For UNIX time only use for input is json

## Data

* Sinvoice supports Unicode standard data (UTF-8).
* For incoming data, the SInvoice system will leave the data format intact to display. Except with numeric data (related to money, quantity, unit price, tax rate), bank name, bank account. The number data sent is always formatted as [0-9.] +. For example 100000.1234. SInvoice's template will automatically display format. For data such as bank name, the account can enter many, separated by semicolon ";"

## Special characters

* Special characters to note and how to handle json or xml standards (need special characters to identify special characters).
* Json: add ‘\’ character before special characters. Ex: Nguyen Van A “B” 🡪 Nguyen Van A \“B\”
* Xml: Encode or use CDATA. Ex: Nguyen Van A &#x3E; B

or <![CDATA[Nguyễn Văn A >B]]>

## Duplicate transactions solution

* The integrated software and SInvoice communicate via the network environment, so it is likely that during the transaction there is a connection error (network error, high load system, etc.). To avoid a transaction made up of 2 duplicate invoices, with each invoice request sent in the invoicing operation, the integrated system generates transactionUuid itself that is unique for that invoice and included in the invoice request. . For details see section 5.2 on the transactionUuid data format
* After the request is made, wait for the request to respond whether the result is true or false or the request does not respond after the timeout period (minimum of 90 seconds). Only then can the request be sent differently from the transactionUuid. Sending 2 simultaneous requests with the same transactionUuid will not be controlled by the processing system but will create 2 different invoices.

## Connection security standards

* The connection API is encrypted using the https protocol with authentication using Basic Auth
* To ensure security, the system does not allow accounts to connect via the API by default. To connect API for accounts, users will have to log in to Viettel web and configure IP to access. For details, see Step 1 in the user configuration guide (Attached link):

<https://sinvoice.viettel.vn/download/soft/h%C3%A6%C2%AF%C3%A1%C2%BB%C2%9Ang_d%C3%A1%C2%BA%C2%AAn_c%C3%A1%C2%BA%C2%A4u_h%C3%A3%C2%8Cnh_user_webservice.doc>

Specification of invoiced input

## Overview

For invoicing APIs, invoice adjustments, invoice replacement, draft invoicing, usb token invoicing, draft bill previews of data fields will take the general form

**{**

 **"generalInvoiceInfo":{ //** **General information of the invoice**

 **},**

 **"buyerInfo":{ // Buyer information**

 **},**

 **"sellerInfo":{ // Seller information**

 **},**

 **"extAttribute":[ //Attribute information**

 **],**

 **"payments":[ // Payment information**

 **],**

 **"deliveryInfo":{ // Delivery information**

 **},**

 **"itemInfo":[ // Item information**

 **],**

 **"metadata":[ //** **metadata**

 **],**

  "**meterReading": //** **Special information for utility bills**

 **],**

 **"summarizeInfo":{ //** **Money summary information of invoice**

 **},**

 **"taxBreakdowns":[ //Information grouping money bills according to tax rates**

 **]**

**}**

Description:

|  |  |
| --- | --- |
| **Field** |  **Description** |
| **generalInvoiceInfo** | This is the general information for issuing the invoice, including invoice template symbol, invoice symbol, invoice type, date of creation, etc. |
| **sellerInfo** | Information about the seller on the invoice. In case the integrating party sends the tax code, the system will retrieve all data sent by the integrator; if not, the system will get the information configured on the system. |
| **buyerInfo** | Information about the buyer on the invoice |
| **extAttribute** | The field is extended, for further customization on the invoice template. This field is no longer used -> Not required |
| **payments** | Name of the payment method of the invoice.  |
| **deliveryInfo** | Currently not in use. |
| **itemInfo** | Detailed information of the goods of the invoice. |
| **discountItemInfo** | Summary of discount information according to each commodity -> Currently not in use |
| **taxBreakdowns** | Aggregate tax information by invoice according to tax rates, for example -2, -1, 0, 5, 10 |
| **summarizeInfo** | Summary of the total bill |
| **metadata** | Dynamic field information of the invoice |
| **meterReading** | Special information, used for electricity / water bill. |

### generalInvoiceInfo

**List of elements**

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| invoiceType | Required: trueDataType: StringMinlength: Maxlength: 50Format: [a-zA-Z0-9/]+ | Allow only these following values: 01GTKT, 02GTTT, 07KPTQ, 03XKNB, 04HGDL, 01BLP. Pursuant to the Decree No. 51/2010/NĐ-CP**Note**: *At a time, businesses can use many types of invoices* |
| templateCode | Required: trueDataType: StringMinlength: Maxlength: 20Format: [a-zA-Z0-9/]+ | Invoice template code. Pursuant to the Decree No.51/2010/NĐ-CP Ex: 01GTKT0/001 **Note**: *At a time, businesses can use many templates of invoices* |
| invoiceSeries | Required : falseDataType: StringMinlength : 6Maxlength : 6Format : [a-zA-Z0-9/]+ | Invoice serial number. Pursuant to the Decree No.51/2010/NĐ-CP.Ex: AA/16E**Notice:** *At a time, businesses may have multiple invoice serials* |
| invoiceIssuedDate | Required: trueDataType: LongMinlength: Maxlength: 50Format:  | Invoice date, according to the principle of ensuring the chronological order in 1 invoice serial of an invoice form with a specific tax code: the following invoice number must be made with a time greater than or equal to the number bill before.**Note**: In case of not sending the created date, the system will automatically retrieve the current time on the system with the GMT + 7 time zone. |
| currencyCode | Required: trueDataType: StringMinlength: Maxlength: 3Format: | Comply with regulations of the State Bank of Vietnam. Ex: USD, VND, EUR… |
| adjustmentType  | Required: trueDataType: StringMinlength: Maxlength: 1Format: | Invoice adjustment status.1: Original invoice3: Invoice replacement5: Adjusted invoice (expected to be removed in accordance with Decree 119)7: Invoice removed |
| adjustmentInvoiceType | Required: trueDataType: StringMinlength: Maxlength: 1Format: | Adjustment type for adjustment invoice1: Money adjustment invoice2: Information adjustment invoice(expected to be removed in accordance with Decree 119) |
| originalInvoiceId | Required : falseDataType: StringMinlength: 7Maxlength: 13Format: [a-zA-Z0-9/]+ | Only used for: Adjustment invoiceReplacement invoiceAdjustment and replacement invoicing are required. |
| originalInvoiceIssueDate | Required : falseDataType: DateMinlength: Maxlength: 50Format: | Original invoicing time. Adjustment and replacement invoicing are required. |
| additionalReferenceDesc  | Required : falseDataType: StringMinlength : Maxlength : 225Format : | Written agreement between the buyer and seller on replacing or adjusting invoices. Adjustment and replacement invoicing are required. |
| additionalReferenceDate | Required : falseDataType: DateMinlength: Maxlength: 50Format: | The date of the written agreement between the buyer and the seller. Adjustment and replacement invoicing are required. |
| paymentStatus | Required: trueDataType: BolleanMinlength: Maxlength: 1Format: | Payment status of invoiceTrue: paidFalse: unpaid |
| cusGetInvoiceRight | Required: trueDataType: BolleanMinlength: Maxlength: 1Format: | Allow user to look up the bill or not.Default: true |
| exchangeRate | Required: falseDataType: BigDecimalMinlength: Maxlength: 13Format: [0-9.]+ | Foreign currency exchange rate at the time of invoice is converted into VND |
| transactionUuid | Required: falseDataType: StringMinlength: Maxlength: 36Format: | The ID to verify the billing transaction, which is generated from the partner's system, is unique for each invoice. In case of sending transactionUuid, the partner system will self-manage to ensure the uniqueness of transactionUuid. For each transactionUuid, once a transactionUuid has been sent with an invoice A, all billing requests with the same transactionUuid will return invoice A and not another invoice. The validity of transactionUuid is 3 days.Recommended: use UUID V4 to avoid duplicate numbers.Reference: https://en.wikipedia.org/wiki/Universally\_unique\_identifier |
| userName | Required: falseDataType: StringMinlength: Maxlength: 100Format: | Name of the biller. If not transferred, the system will automatically retrieve the user used for authentication to save |
| certificateSerial | Required: falseDataType: StringMinlength: Maxlength: 100Format: | Used when invoicing using a USB Token.Serial Number of the enterprise's digital certificate, this digital certificate has been pushed up on the system by the enterprise when registering to use USB Token.Hex formatEx: 5404FFFEB7033FB316D672201B7BA4FE |

**Sample data**

Original invoice

 "generalInvoiceInfo": {

 "invoiceType": "01GTKT",

 "templateCode": "01GTKT0/001",

 "invoiceSeries": "AB/18E",

 "invoiceIssuedDate": 1543842113042,

 "currencyCode": "VND",

 "adjustmentType": "1",

 "paymentStatus": true,

 "cusGetInvoiceRight": true,

 "userName": "1000317707" }

Money adjustment invoice

"generalInvoiceInfo": {

 "invoiceType": "01GTKT",

 "templateCode": "01GTKT0/383",

 "invoiceSeries": "AB/18E",

 "invoiceIssuedDate": 1544152232729,

 "invoiceSignedDate": 1544152232729,

 "currencyCode": "VND",

 "adjustmentType": "5",

 "adjustmentInvoiceType": "1",

 "originalInvoiceId": "AB/18E0000036",

 "originalInvoiceIssueDate": 1544152198000,

 "additionalReferenceDesc": "Văn bản",

 "additionalReferenceDate": 1544115600000,

 "paymentStatus": true,

 "cusGetInvoiceRight": true,

 "userName": "test7"

 }

Information adjustment invoice

"generalInvoiceInfo": {

 "invoiceType": "01GTKT",

 "templateCode": "01GTKT0/383",

 "invoiceSeries": "AB/18E",

 "invoiceIssuedDate": 1544152232729,

 "invoiceSignedDate": 1544152232729,

 "currencyCode": "VND",

 "adjustmentType": "5",

 "adjustmentInvoiceType": "2",

 "originalInvoiceId": "AB/18E0000036",

 "originalInvoiceIssueDate": 1544152198000,

 "additionalReferenceDesc": "Văn bản",

 "additionalReferenceDate": 1544115600000,

 "paymentStatus": true,

 "cusGetInvoiceRight": true,

 "userName": "test7"

 }

Invoice replacement

"generalInvoiceInfo": {

 "invoiceType": "01GTKT",

 "templateCode": "01GTKT0/383",

 "invoiceSeries": "AB/18E",

 "invoiceIssuedDate": 1544157807809,

 "invoiceSignedDate": 1544157807809,

 "currencyCode": "VND",

 "adjustmentType": "3",

 "originalInvoiceId": "AB/18E0000037",

 "originalInvoiceIssueDate": 1544152202000,

 "additionalReferenceDesc": "Văn bản",

 "additionalReferenceDate": 1544115600000,

 "paymentStatus": true,

 "cusGetInvoiceRight": true,

 "userName": "test7"

 }

### sellerInfo

Seller information on the invoice, can be transmitted or retrieved automatically on the electronic invoice system. In case the sellerTaxCode is not transferred, the data will be retrieved from the electronic billing system.

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| sellerLegalName | Required: trueDataType: StringMinlength: Maxlength: 255Format: | Seller legal name. |
| sellerTaxCode | Required: trueDataType: StringMinlength: Maxlength: 20Format: | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001**Note**: *This code is used to check whether the data will be taken from the SInvoice system or transmitted by the integrated software. If data is available, it will retrieve all seller information from the integrated software. If not, it will retrieve the information configured on SInvoice. This code cannot be used to issue invoices.* |
| sellerAddressLine | Required: trueDataType: StringMinlength: Maxlength: 255Format: | Seller Address. |
| sellerPhoneNumber | Required: falseDataType: StringMinlength: Maxlength: 20Format: \d+ | Seller’s phone number |
| sellerFaxNumber | Required: falseDataType: StringMinlength: Maxlength: 20Format: \d+ | Seller ‘ fax. |
| sellerEmail | Required: falseDataType: StringMinlength: Maxlength: 50Format: ^[\_A-Za-z0-9-\+]+(\.[\_A-Za-z0-9-]+)\*@[A-Za-z0-9-]+(\.[A-Za-z0-9]+)\*(\.[A-Za-z]{2,})$ | Seller’s email. |
| sellerBankName | Required: falseDataType: StringMinlength: Maxlength: 100Format: | The name of the bank where seller opens the trading account.If there is more information separated by semicolons (;) |
| sellerBankAccount | Required: falseDataType: StringMinlength: Maxlength: 20Format: | Seller’s bank account.If there is more information separated by semicolons (;) |
| sellerDistrictName | Required: falseDataType: StringMinlength: Maxlength: 50Format: | District. |
| sellerCityName | Required: falseDataType: StringMinlength: Maxlength: 25Format: | Province/ City |
| sellerCountryCode | Required: falseDataType: StringMinlength: Maxlength: 15Format: | Seller’s country code.  |
| sellerWebsite | Required: falseDataType: StringMinlength: Maxlength: 100Format: | Website |

**Sample data**

"sellerInfo": {

 "sellerLegalName": "Người bán hàng",

 "sellerTaxCode": "0100109106",

 "sellerAddressLine": "Thành Phố Hà Nội - Việt Nam",

 "sellerPhoneNumber": "0123456789",

 "sellerEmail": "email@gmail.com",

 "sellerBankName": "Ngân hàng ",

 "sellerBankAccount": "012345678901"

 }

### buyerInfo

Seller information on the invoice

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| buyerName | Required: trueDataType: StringMinlength: Maxlength: 255Format: | Buyer’s name |
| buyerCode | Required: falseDataType: StringMinlength: Maxlength: 100Format: [a-zA-Z0-9/-]+ | Buyer’s code  |
| buyerLegalName | Required: falseDataType: StringMinlength: Maxlength: 255Format: | Name (business registration in case of an enterprise) of the buyer.**Note**: *Buyer name or unit name is required* |
| buyerTaxCode | Required: falseDataType: StringMinlength: Maxlength: 20Format: | Buyer’s tax code. Provided by General Department of Taxation. Ex 1: 0312770607 Ex 2: 0312770607-001 |
| buyerAddressLine | Required: trueDataType: StringMinlength: Maxlength: 255Format: | Buyer’s address  |
| buyerPhoneNumber | Required: falseDataType: StringMinlength: Maxlength: 20Format: \d+ | Phone numbers of buyers, phone numbers will be used to send messages in case the seller registers SMS Brandname service. If there are multiple phone numbers, separated by (;) |
| buyerFaxNumber | Required: falseDataType: StringMinlength: Maxlength: 20Format: \d+ | Buyer’s fax |
| buyerEmail | Required: falseDataType: StringMinlength: Maxlength: 50Format: ^[\_A-Za-z0-9-\+]+(\.[\_A-Za-z0-9-]+)\*@[A-Za-z0-9-]+(\.[A-Za-z0-9]+)\*(\.[A-Za-z]{2,})$ | Buyer email, used to send invoice to buyerIf there are multiple emails, separated by semicolons (;). When the seller's email account is configured on the system, the system will automatically send it if there is a buyer's email. Detailed email configuration see here: <https://sinvoice.viettel.vn/ho-tro/huong-dan-su-dung/5-huong-dan-cau-hinh-doanh-nghiep--cau-hinh-chung> |
| buyerBankName | Required: falseDataType: StringMinlength: Maxlength: 100Format: | The name of the bank where buyer opens the trading account.If there is more information separated by semicolons (;) |
| buyerBankAccount | Required: falseDataType: StringMinlength: Maxlength: 20Format: | Buyer’s bank account.If there is more information separated by semicolons (;) |
| buyerDistrictName | Required: falseDataType: StringMinlength: Maxlength: 50Format: | District name. |
| buyerCityName | Required: falseDataType: StringMinlength: Maxlength: 25Format: | Province/City name |
| buyerCountryCode | Required: falseDataType: StringMinlength: Maxlength: 15Format: | Buyer’s country code.  |
| buyerIdType | Required: falseDataType: StringMinlength: Maxlength: 15Format: ^(\+?\d{1,3}|\d{1,4})$ | Type of buyer documents,- 1: ID card number- 3: Business license- 2: Passport |
| buyerIdNo | Required: falseDataType: StringMinlength: Maxlength: 15Format: ^(\+?\d{1,3}|\d{1,4})$ | When buyerIdType is valid, buyerIdNo is required to be valid.The buyer’s paper number, which can be identification card, business license, passport. |
| buyerBirthDay | Required: falseDataType: DateMinlength: Maxlength: 15Format:  | The date of birth of the buyer |

Sample data

"buyerInfo": {

 "buyerName": "Tên khách hàng",

 "buyerLegalName": "Tên đơn vị",

 "buyerTaxCode": "01234567890",

 "buyerAddressLine": "An Khánh Hoài Đức Hà Nội",

 "buyerPostalCode": "2342324323",

 "buyerDistrictName": "Số 9, đường 11, VSIP Bắc Ninh, Thị xã Từ Sơn, Tỉnh",

 "buyerCityName": "Thành Phố Hà Nội",

 "buyerCountryCode": "84",

 "buyerPhoneNumber": "987999999",

 "buyerFaxNumber": "0458954",

 "buyerEmail": "minhltt@viettel.com.vn",

 "buyerBankName": "Ngân hàng Quân đội MB",

 "buyerBankAccount": "01578987871236547",

 "buyerIdType": "3",

 "buyerIdNo": "8888899999",

 "buyerCode": "832472343b\_b",

 "buyerBirthDay": ""

 }

### extAttribute

**The field is extended, for further customization on the invoice template. This field is no longer used -> Not required**

### payments

As a rule, 1 bill can have 1 or more forms of payment

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| paymentMethodName | Required: trueDataType: StringMinlength: Maxlength: 50Format: | Mode of payment: CK – Bank transfersDTCN – Contra entryTM – CashTM/CK – Bank transfers / Cash Or Enter any value |

### itemInfo

**List of elements**

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| lineNumber | Required: trueDataType: IntegerMinlength: Maxlength: 5Format: ^(?!^0)\\d{1,9}$ | Line number. |
| selection | Required: falseDataType: IntegerMinlength: Maxlength: 1Format: ^(?!^0)\\d{1,9}$ | Mark the type of goods / servicesNull or 1- Goods (Required quantity, unit price)2: Note (Do not give birth and do not add money to the total payment)3: Discount (No need to enter quantity, unit price and add isIncreaseItem = false to determine the discount)4: List (No need to enter the quantity, unit price, just enter the money)5: Other fees (Required quantity, unit price) Other charges are used to display in a different area on the invoice template, which is not in the merchandise table, in case the invoice template has a separate form of charge to display. For example, service charges when buying airline tickets. See details at: <https://sinvoice.viettel.vn/ho-tro/huong-dan-su-dung/huong-dan-cac-khai-niem-thanh-phan-trong-he-thong-hoa-don-dien-tu> |
| itemCode | Required: falseDataType: StringMinlength: Maxlength: 50Format: [a-zA-Z0-9/-\_]+ | Item’s code. |
| itemName | Required: trueDataType: StringMinlength: Maxlength: 300Format: | Item’s name. |
| unitCode | Required: falseDataType: StringMinlength: Maxlength: 10Format: | Unit code. |
| unitName | Required: trueDataType: StringMinlength: Maxlength: 50Format: | Unit name. |
| unitPrice | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Unit price of the goods, no negative numbers. In case you do not want to show up on the invoice, do not pass on (pass null to).Details of conditions for entry with types:- Goods: Import required- Note: may or may not enter- Discount: may or may not enter- List: can enter or not- Other fees: required |
| quantity | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | The quantity of the goods, always positive. In case you do not want to show up on the invoice, do not pass on (pass null to).Details of conditions for entry with types:- Goods: Import required- Note: may or may not enter- Discount: may or may not enter- List: can enter or not- Other fees: required |
| itemTotalAmountWithoutTax | Required: trueDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Is the total amount excluding VAT of goods / services. The sum has no negative numbers. itemTotalAmountWithoutTax = quantity \* unitPriceThe system will check the data received on the left side with the calculation data on the right to check the accuracy of the data.Ordinary invoice: The total amount of goods and services without VAT.Adjusted invoice: It is the total adjustment of goods and services without VATDetailed entry conditions with categories- Goods: must have information- Note: not required- Discount: must have information- List: must have information- Other fees: must have information |
| taxPercentage | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | In case of gross tax / sales invoice (standard invoice authentication is required)- Gross tax: to follow the general figure- Sales invoice / non-tax invoice: -2Tax rates of goods and services. Tax rates include the following types:-2: no taxes-1: No tax declaration / payment This place is quite opposite of the invoice with the verification code of the GDT0: 0%5: 5%10: 10% |
| taxAmount | Required: trueDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | In case of gross tax / sales invoice: (standard invoice is required to have true)- Total tax: total amount of goods \* general tax- Sales invoice / non-tax invoice: 0Total tax amount, no negative numbers |
| isIncreaseItem | Required: falseDataType: BooleanMinlength: Maxlength: 20Format: | Used to denote money on an invoice that is a negative number in the case of discounted goods, or a line of goods indicates an adjustment to reduce the amount of goods.When this flag is marked as false, all amounts such as taxAmount, itemTotalAmountWithoutTax, itemTotalAmountWithTax are marked as negative.Normal invoice: has value as null.Invoice adjusted:- false: the flow of goods / services is reduced- true: the flow of goods / services has been increased |
| itemNote | Required: falseDataType: StringMinlength: Maxlength: 50Format: | Item’s note. |
| batchNo | Required: falseDataType: StringMinlength: Maxlength: 50Format: | Batch number*Can be used to display additional information in case of need.* |
| expDate | Required: falseDataType: StringMinlength: Maxlength: 50Format: | Item’s expired date*Can be used to display additional information in case of need.* |
| discount | Required: falseDataType: BigDecimalMinlength: Maxlength: 13Format: [0-9.]+ | % discount on product line, calculated on product unit price. In the absence, then transmit 0 |
| discount2 | Required: falseDataType: BigDecimalMinlength: Maxlength: 13Format: [0-9.]+ | 2nd% discount on product line, calculated on product unit price. In the absence, then transmit 0. |
| itemDiscount | Required: falseDataType: BigDecimalMinlength: Maxlength: 13Format: [0-9.]+ | Discounted value on product line, after multiplying by quantity and % discount |
| itemTotalAmountAfterDiscount | Required: falseDataType: BigDecimalMinlength: Maxlength: 13Format: [0-9.]+ | Total money after discount, discount.The sum has no negative numbers. |
| itemTotalAmountWithTax | Required: falseDataType: BigDecimalMinlength: Maxlength: 13Format: [0-9.]+ | The total amount includes VAT of goods / services. The sum has no negative numbers |

**Note**: *For each commodity line, in the case of information fields such as quantity, unitPrice, itemTotalAmountWithoutTax, taxPercentage, taxAmount, discount, itemDiscount, itemTotalAmountWithTax have data (data other than null), the system will calculate and check Look up the data
The comparison system of quantity x unitPrice is no more than 1 dong compared to itemTotalAmountWithoutTax
The system compares the itemTotalAmountWithoutTax when the error is too skewed*

Sample data

"itemInfo": [

 { hàng\_hóa\_1}, { hàng\_hóa\_1}

 ]

Goods

"itemInfo": [

 {

 "lineNumber": 1,

 "itemCode": "PCDELLV3653\_i56400\_R4H10DVDRW",

 "itemName": "Máy tính để bàn DELL VOSTRO 3653 Desktop Core i5-6400 upto3.30Ghz/ 4GB/ 1TB HDD/DVDRW/NVIDIA Geforce 705 2Gb/ Wireless-Bluetooth/ K/ M/1Yr Pro",

 "unitName": "Cái",

 "itemNote": "",

 "unitPrice": 10300000,

 "quantity": 1,

 "itemTotalAmountWithoutTax": 10300000,

 "itemTotalAmountWithTax": 11330000,

 "itemTotalAmountAfterDiscount": 10300000,

 "taxPercentage": 10,

 "taxAmount": 1030000,

 "customTaxAmount": "0",

 "discount": 0,

 "itemDiscount": 0,

 "batchNo": "",

 "expDate": ""

 }

 ]

Goods type notes

"itemInfo": [

 {

 "lineNumber": 2,

 "selection": 2,

 "itemName": "Ghi chú cho hóa đơn",

 }

 ]

Goods discount type

"itemInfo": [

 {

 "lineNumber": 2,

 "itemCode": "chieu\_khau\_hang\_hoa",

 "selection": 3,

 "itemName": "Chiếu khấu hàng hóa",

 "unitName": "",

 "itemNote": "",

 "itemTotalAmountWithoutTax": 50000,

 "itemTotalAmountWithTax": 50000,

 "itemTotalAmountAfterDiscount": 50000,

 "taxPercentage": 0,

 "taxAmount": 0,

 "customTaxAmount": "0",

 "discount": 0,

 "itemDiscount": 0,

 "isIncreaseItem": false,

 "batchNo": "",

 "expDate": ""

 }

 ]

Goods with discount on the product line

"itemInfo": [

 {

 "lineNumber": 1,

 "itemCode": "LCDLI2215S\_LNV",

 "itemName": "Màn hình vi tính LENOVO LCD LI2215S 21.5\" Led (65CCAACC6VN)",

 "unitName": "Cái",

 "itemNote": "",

 "unitPrice": 1750000,

 "quantity": 2,

 "itemTotalAmountWithoutTax": 3500000,

 "itemTotalAmountWithTax": 3696000,

 "itemTotalAmountAfterDiscount": 3360000,

 "taxPercentage": 10,

 "taxAmount": 336000,

 "customTaxAmount": "0",

 "discount": 4,

 "itemDiscount": 140000,

 "batchNo": "",

 "expDate": ""

 }

 ]

Goods list type

"itemInfo": [

 {

 "lineNumber": 1,

 "itemCode": "bang\_ke\_hang\_hoa",

 "selection": 4,

 "itemName": "Bảng kê hàng hóa",

 "unitName": "",

 "itemNote": "",

 "itemTotalAmountWithoutTax": 97770000,

 "itemTotalAmountWithTax": 107547000,

 "itemTotalAmountAfterDiscount": 97770000,

 "taxPercentage": 10,

 "taxAmount": 9777000,

 "customTaxAmount": "0",

 "discount": 0,

 "itemDiscount": 0,

 "batchNo": "",

 "expDate": ""

 }

 ]

Goods of other types of fees

"itemInfo": [

 {

 "lineNumber": 2,

 "itemCode": "phi\_bao\_tri",

 "selection": 5,

 "itemName": "Phí bảo trì",

 "unitName": "",

 "itemNote": "",

 "unitPrice": 20000,

 "quantity": 1,

 "itemTotalAmountWithoutTax": 20000,

 "itemTotalAmountWithTax": 20000,

 "itemTotalAmountAfterDiscount": 20000,

 "taxPercentage": 0,

 "taxAmount": 0,

 "customTaxAmount": "0",

 "discount": 0,

 "itemDiscount": 0,

 "batchNo": "",

 "expDate": ""

 }

 ]

Goods is downward adjustment

"itemInfo": [

 {

 "lineNumber": 1,

 "itemCode": "DELL\_LJ2350D",

 "itemName": "Điều chỉnh giảm tiền hàng, tiền thuế của hàng hóa/dịch vụ: Máy in Dell LJ 2350D 1Y Wty",

 "unitName": "Cái",

 "itemNote": "",

 "unitPrice": 6281000,

 "quantity": 3,

 "itemTotalAmountWithoutTax": 18843000,

 "itemTotalAmountWithTax": 20727300,

 "itemTotalAmountAfterDiscount": 18843000,

 "taxPercentage": 10,

 "taxAmount": 1884300,

 "customTaxAmount": "0",

 "adjustmentTaxAmount": 1,

 "discount": 0,

 "itemDiscount": 0,

 "isIncreaseItem": false,

 "batchNo": "",

 "expDate": ""

 },

 {

 "selection": 2,

 "itemName": "Điều chỉnh giảm tiền hàng, tiền thuế cho hóa đơn điện tử số AB/18E0000034 lập ngày 07/12/2018 số tiền: 20.727.300 "

 }

 ]

Goods is adjusted up

"itemInfo": [

 {

 "lineNumber": 1,

 "itemCode": "DELL\_LJ2350D",

 "itemName": "Điều chỉnh tăng tiền hàng, tiền thuế của hàng hóa/dịch vụ: Máy in Dell LJ 2350D 1Y Wty",

 "unitName": "Cái",

 "itemNote": "",

 "unitPrice": 6281000,

 "quantity": 5,

 "itemTotalAmountWithoutTax": 31405000,

 "itemTotalAmountWithTax": 34545500,

 "itemTotalAmountAfterDiscount": 31405000,

 "taxPercentage": 10,

 "taxAmount": 3140500,

 "customTaxAmount": "0",

 "adjustmentTaxAmount": 1,

 "discount": 0,

 "itemDiscount": 0,

 "isIncreaseItem": true,

 "batchNo": "",

 "expDate": ""

 },

 {

 "selection": 2,

 "itemName": "Điều chỉnh tăng tiền hàng, tiền thuế cho hóa đơn điện tử số AB/18E0000036 lập ngày 07/12/2018 số tiền: 34.545.500 "

 }

]

### taxBreakdowns

Aggregate tax rates according to the level for the invoice

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| taxPercentage | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ |  Tax rate: declare value as follows* 0%: 0
* 5%: 5
* 10%: 10
* Tax exemption: -1
* Non-taxable: -2

**Note**: *Each tax value only appears once (save the aggregate value of goods of the same tax type)* |
| taxableAmount | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | The total taxable amount of the corresponding tax rate, the total taxable amount has no negative numbers. The sum of itemTotalAmountWithoutTax of all itemInfo has the same tax rate as the combined tax rate. In case of discounted goods flow. |
| taxAmount | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | The total tax amount of the corresponding tax rate, the total tax amount without negative numbers. Equals the sum of taxAmount of all itemInfo that has the same tax rate as the combined tax rate. In case of discounted goods flow. |
| taxableAmountPos | Required: falseDataType: BooleanMinlength: Maxlength: 13Format: | Used to indicate whether the total taxable amount of the tax rate is negative or positive.- null / true: Total tax amount is positive. Used for ordinary goods.- false: The sum of the tax levy is negative, used with the reduced invoice or the invoice for the goods being the discount, the total amount of the goods and the discount of the tax rate are negative |
| taxAmountPos | Required: falseDataType: BooleanMinlength: Maxlength: 20Format: | Used to indicate whether the total tax amount of the tax rate is negative or positive. The value of taxAmountPos is always the same as the value of taxableAmountPos.- null / true: Total positive tax amount- false: The total tax amount is negative |
| taxExemptionReason | Required: falseDataType: StringMinlength: Maxlength: 255Format: | Reason for tax exemption |

**Note**: *The system compares the sum of itemTotalAmountWithoutTax of all itemInfo in the same tax rate as taxableAmount in taxBreakDowns. In case of deviation the system will report an error.
The system compares the sum of taxAmount of all itemInfo in the same tax rate as taxAmount in taxBreakDowns. In case of deviation the system will report an error*

Sample data

Tax rate %

"taxBreakdowns": [

 {

 "taxPercentage": 5,

 "taxableAmount": 400000,

 "taxAmount": 20000

 },

 {

 "taxPercentage": 10,

 "taxableAmount": 400000,

 "taxAmount": 40000

 }

 ]

Non-taxable

"taxBreakdowns": [

 {

 "taxPercentage": -2,

 "taxableAmount": 400000,

 "taxAmount": 0

 }

 ]

No tax declaration

"taxBreakdowns": [

 {

 "taxPercentage": -1,

 "taxableAmount": 400000,

 "taxAmount": 0

 }

 ]

The invoice has a negative tax

"taxBreakdowns": [

 {

 "taxPercentage": 10,

 "taxableAmount": 100000,//tổng tiền âm 100000

 "taxAmount": 10000,//thuế âm 10000

 "taxableAmountPos": false,

 "taxAmountPos": false

 }

 ]

### summarizeInfo

Aggregate item cost for the entire bill.

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| sumOfTotalLineAmountWithoutTax | Required: trueDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Sum of total item amount without VAT.* Normal invoice: Sum of total item amount without VAT.
* Adjustment invoice: Sum of total adjusted item amount without VAT.
 |
| totalAmountWithoutTax | Required: trueDataType: DoubleMinlength: Maxlength: 15Format: [0-9.]+ | Total invoice without VAT. * Normal: Total amount of items and other changed amount on the invoices.
* Adjustment invoice: Total adjusted amount and other changed amount on the invoices..
 |
| totalTaxAmount | Required: trueDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Total tax amount.* Normal invoice: Total VAT and other taxes on the invoices.
* Adjustment invoice: Total VAT adjusted and other taxes on the invoices.
 |
| totalAmountWithTax | Required: trueDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Total amount including VAT.* Normal invoice: Total amount of money on HDDs and other increases / decreases throughout the contract including VAT.
* Adjustment invoice: Total adjusted amount and other increases/decreases amount on invoices including VAT.
 |
| totalAmountWithTaxFrn | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Total amount of foreign currency including VAT. * Normal invoice: Total amount of foreign currency and other changes including VAT.
* Adjustment invoice: Total adjusted amount of foreign currency and other changes including VAT.
 |
| totalAmountWithTaxInWords | Required: falseDataType: StringMinlength: Maxlength: 255Format: | Total amount includes VAT written in words. |
| isTotalAmountPos | Required: falseDataType: BooleanMinlength: Maxlength: 20Format: | To mark the total after tax amount as negative or positive- null / True: The total amount is positive, used for ordinary invoices or discounted invoices but the total tax is still positive after deducting discount.- False: The total negative amount, used for reduced or reduced invoices with a discount greater than regular goods. |
| isTotalTaxAmountPos | Required: falseDataType: BooleanMinlength: Maxlength: 20Format: | To mark the total tax amount as negative or positive- null / true: total tax amount is positive- false: total tax amount is negative |
| isTotalAmtWithoutTaxPos | Required: falseDataType: BooleanMinlength: Maxlength: 20Format: | To mark the total amount before tax as negative or positive- null / true: the total amount before tax is positive- false: the total amount before taxes are negative |
| discountAmount | Required: trueDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Discount amount before VAT. |
| settlementDiscountAmount | Required: falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Discount amount after VAT. |
| isDiscountAmtPos | Required: falseDataType: BooleanMinlength: Maxlength: 20Format: | The field recognizes whether the total discount is positive or negative- null / true: the total amount before tax is positive- false: the total amount before taxes are negative |

Sample data

"summarizeInfo": {

 "sumOfTotalLineAmountWithoutTax": 100000,

 "totalAmountWithoutTax": 100000,

 "totalTaxAmount": 10000,

 "totalAmountWithTax": 110000,

 "totalAmountAfterDiscount": 0,

 "totalAmountWithTaxInWords": "Một trăm mười nghìn đồng",

 "discountAmount": 0,

 "taxPercentage": 10

 }

The invoice has a negative total

"summarizeInfo": {

 "sumOfTotalLineAmountWithoutTax": 100000,

 "totalAmountWithoutTax": 100000,

 "totalTaxAmount": 10000,

 "totalAmountWithTax": 110000,

 "totalAmountAfterDiscount": 0,

 "totalAmountWithTaxInWords": "Một trăm mười nghìn đồng",

 "discountAmount": 0,

 "taxPercentage": 10,

 "isTotalAmountPos": false,

 "isTotalTaxAmountPos": false,

 "isTotalAmtWithoutTaxPos": false

 }

### metadata

Dynamic information field data, in addition to the information fields described in this section 6. If the information field does not yet exist in section 5, it is required to declare more. This dynamic field will be specific to each sample. The list of dynamic fields of a particular sample will be taken by the function 6.8

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| invoiceCustomFieldId | Required : trueDataType: NumberMinlength : Maxlength : 10Format :  | ID. |
| keyTag | Required : trueDataType: String | Key Tag what is saved in data (xml,db…) |
| valueType | Required : trueDataType: String | Value type only allow: “text”, “date”, “number” |
| keyLabel | Required : trueDataType: String | Key label is showed in website interface. |
| dateValue | Required : falseDataType: Date | valueType = date |
| numberValue | Required : falseDataType: Number | valueType = number |
| stringValue | Required : falseDataType: String | valueType = text |

**Sample data**

"metadata": [

 {

 "invoiceCustomFieldId": 1135,

 "keyTag": "dueDate",

 "valueType": "date",

 "dateValue": 1544115600000,

 "keyLabel": "Hạn thanh toán",

 "isRequired": false,

 "isSeller": false

 },

 {

 "invoiceCustomFieldId": 1136,

 "keyTag": "contractNo",

 "stringValue": "555",

 "valueType": "text",

 "keyLabel": "Hợp dong số",

 "isRequired": false,

 "isSeller": false

 }

 ]

### meterReading

Special information, used for electricity / water bill.

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| previousIndex | Required : falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Privious index |
| currentIndex | Required : falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Current index. |
| factor | Required : falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Coefficient |
| amount | Required : falseDataType: DoubleMinlength: Maxlength: 13Format: [0-9.]+ | Amount = (Current index - Privious index) x Coefficient |

Sample data

"meterReading": [{

 "previousIndex": "110",

 "currentIndex": "150",

 "factor": "1",

 "amount": "40"

 },

 {

 "previousIndex": "44",

 "currentIndex": "50",

 "factor": "1",

 "amount": "6"

 }]

 APIs

## Before action.

Before getting dirty hand with any apis below, we need to prepare everything ready.

* Account.

+ Register service (provided by Viettel staff if demo-system)

* Invoice template (Use to view invoice in pdf format).

+ Access to Sinvoice web business with account above -> publish management -> Invoice type management -> Add invoice template **name** and save

+ Access to Sinvoice web business with account above -> publish management -> create enterprise info -> choose invoice template prensentation suitable for your needs -> select and save

* Digital signature.

+ Contact to Viettel Staff for help

* Invoice Serial.

+ Access to Sinvoice web business with account above -> publish management -> Invoice serial management -> Add invoice serial and save.

* Invoice Annoucement.

+ To make your invoice template valid, you need to declare to Vietnam tax authority to declare about using electronic invoice instead of paper invoice.

+ Access to Sinvoice web business with account above -> publish management -> invoice publish announcement -> add all needed information -> save -> send request for approval

+ Viettel‘s admin will see and review to approve your announcement request -> **Everything is ready**

Notes:

Test system information (Perform connection test on test system without test connection on real system)

Link web**:** <https://demo-sinvoice.viettel.vn>

Link API: [https://demo-sinvoice.viettel.vn:8443/InvoiceAPI](https://e-invoice.com.vn:8443/InvoiceAPI)

* Real system information (Only real invoices issued)

Link web**:** <https://business-sinvoice.viettel.vn>

Link API: <https://api-sinvoice.viettel.vn:443>

* Authentication

Authentication using user: pass string (Basic Authentication) is encoded as Base64

Ex: QWxhZGRpbjpPcGVuU2VzYW1l



**Note**: For each user, the system only allows certain IP addresses to access the web service. The IP must be the public IP of the partner system (check by visiting the link https://www.whatismyip.com/). To update the IP, users can update themselves through the instructions of Step 1 in the document (<https://sinvoice.viettel.vn/download/soft/huong_dan_cau_hinh_user_webservice.doc> )

* Content-Type: Data submitted to the Web service can be JSON, XML, FormParam or QueryParam

+ JSON: Add header: Content-Type: application / json

+ XML: Add header: Content-Type: application / xml

+ FormParam: Add header: Content-Type: application / x-www-form-urlencoded

+ QueryParam: No headers needed, parameters passed via URL

* Accept: Data returned from Web service can be JSON or XML

+ JSON: Add header: Accept: application / xml
+ XML: Add header: Accept: application / json

**Note**: Because of the connection time and request processing time, the results may need to wait (recommended to timeout time when sending requests about 60-90 seconds)

## Issue / replace / adjust invoice (For HSM digital certificates)

* **Input:**

Webservice shared in the case of original invoicing, invoicing for money adjustment, invoicing information adjustment and invoicing replacement.

* Action (POST): /InvoiceAPI/InvoiceWS/createInvoice/{supplierTaxCode}
* Headers:

+ Authorization: username/pass

+ Content-Type : application/json or application/xml

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11 | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |

* Data: Billing sample data (Details of objects see each item in section 5)

**{**

 **"generalInvoiceInfo":{ //** **General information of the invoice**

 **},**

 **"buyerInfo":{ // Buyer information**

 **},**

 **"sellerInfo":{ // Seller information**

 **},**

 **"extAttribute":[ //Attribute information**

 **],**

 **"payments":[ // Payment information**

 **],**

 **"deliveryInfo":{ // Delivery information**

 **},**

 **"itemInfo":[ // Item information**

 **],**

 **"metadata":[ //** **Dynamic field information**

 **],**

  "**meterReading": //** **Special information for utility bills**

 **],**

 **"summarizeInfo":{ //** **Money summary information of invoice**

 **},**

 **"taxBreakdowns":[ //Information grouping money bills according to tax rates**

 **]**

**}**

**Note:** This data includes all possible data fields when invoicing. Not all information fields are required, and users can remove them to suit the needs of their customers. Details of mandatory and non-mandatory information fields are see in section 5

Ex data

|  |  |  |
| --- | --- | --- |
| Sample data | JSON | XML |
| Original invoice |  |  |
| Invoice replacement |  |  |
| Information adjustment invoice (expected to be removed in accordance with Decree 119) |  |  |
| Money adjustment invoice (expected to be removed in accordance with Decree 119) |  |  |

* **Output:**

The Response object describes the error state Webservice returns and the Webservice data object returns:

* Invoice information

Json:

**{**

 "errorCode": ""**,**

 "description": ""**,**

 "result": **{**

 "supplierTaxCode": 1258694363**,**

 "invoiceNo": AA**/**16E0000001**,**

 "transactionID": 12523522245**,**

 "reservationCode": AXHBNK8I0H

 **}**

**}**

XML:

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>

<createInvoiceOutput>

 <result>

 <invoiceNo>BD/17E0000110</invoiceNo>

 <reservationCode>2M9U3PU638</reservationCode>

 <supplierTaxCode>0100109106</supplierTaxCode>

 <transactionID>1514296135756</transactionID>

 </result>

</createInvoiceOutput>

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>

<createInvoiceOutput>

 <description>Phải chọn loại template hóa đơn</description>

 <errorCode>TEMPLATE\_NOT\_FOUND</errorCode>

 </createInvoiceOutput>

Description

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| supplierTaxCode | The seller's tax code |
| invoiceNo | Invoice number Ex: AA\16E0000001 |
| transactionID | Transaction ID |
| reservationCode | Reservation Code |

## Webservice gets the invoice file

The webservice for the integrated system can retrieve invoice files after being created in step 6.2.
**Note**: The electronic invoice system runs asynchronously, so the system pushes the invoice to the database after receiving the request to issue an invoice for about 1s. Therefore, when integrating, the request to get the invoice file should be made after 2-5 seconds after issuing the invoice.

* **Input:**
* Action (POST) URL: [/InvoiceAPI/](https://10.60.108.210:8273/InvoiceAPI/InvoiceWS/createBatchInvoice/0100109106)InvoiceUtilsWS/getInvoiceRepresentationFile
* Headers:

+ Authorization: username/pass

+ Content-Type : application/json or application/xml

* CommonDataInput object’s parameters

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 15Format : [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| invoiceNo | Required : trueDataType: StringFormat : [A-Z]{2}/[a-zA-Z0-9]{10} | Invoice number (including invoice serial and invoice numbers)Ex: AA/16E0000001 |
| templateCode | Required : trueDataType: StringMinlength : 11Maxlength : 11Format : [a-zA-Z0-9]{7}/[0-9]{3} | Invoice template code. Pursuant to the Decree No.51/2010/NĐ-CP Ex: 01GTKT0/001 |
| transactionUuid | Required : falseDataType:StringMinlength : 1Maxlength : 36 | transactionUuid |
| fileType | Required : trueDataType: StringFormat : ZIP or PDF | File type |
| paid | Required : falseDataType: Boolean | True – PaidFalse – Unpaid |

Ex:

* JSON:

{

"supplierTaxCode":"0100109106",

"invoiceNo":"AA/17E0000166",

"pattern":"01GTKT0/151",

"transactionUuid":"testuuid9999999",

"fileType":"ZIP"

}

* XML:

**<?xml version="1.0" encoding="UTF-8" ?>**

**<commonDataInput>**

 **<supplierTaxCode>0100109106</supplierTaxCode>**

 **<** **invoiceNo>AA/17E0000166</invoiceNo >**

 **< pattern>01GTKT0/151</ pattern >**

 **< transactionUuid >ZIP</ transactionUuid >**

 **< fileType>ZIP</fileType >**

**</commonDataInput>**

* **Output:**

|  |  |
| --- | --- |
| **Field name**  | **Description** |
| errorCode | Error code |
| description | Description |
| fileName | File’s name |
| fileToBytes | File content converted to bytes. |

## Webservice gets the invoice file Portal.

The webservice for the integrated system can retrieve invoice files after being created in step 6.2.
**Note**: The electronic invoice system runs asynchronously, so the system pushes the invoice to the database after receiving the request to issue an invoice for about 1s. Therefore, when integrating, the request to get the invoice file should be made after 2-5 seconds after issuing the invoice

* **Input:**
* Action (POST): InvoiceAPI/InvoiceUtilsWS/getInvoiceFilePortal
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/x-www-form-urlencoded

* Data: FormParam (POST method) or QueryParam (GET method) include parameters

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, Constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11Format: [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| invoiceNo | Required: trueDataType: StringMinlength: 7Maxlength: 13Format: [a-zA-Z0-9/]+ | Invoice number (including invoice serial and invoice numbers).Ex: AA/16E0000001 |
| buyerIdNo | Required: falseDataType: StringMinlength: Maxlength: 100Format: | Buyer’s id |
| reservationCode | Required: trueDataType: StringMinlength: Maxlength: 100Format: | Reservation Code |
| fileType | Required: trueDataType: StringMinlength: Maxlength: 100Format:  | File type: xml, zip |
| strIssueDate | Required: trueDataType: StringMinlength: Maxlength: Format: yyyyMMddHHmmss | Invoice time to milliseconds. |

* Ex: FormParam(POST method)

Body: supplierTaxCode=0100109106&invoiceNo=AC%2F18E0000039&strIssueDate=20180130094136&fileType=zip&reservationCode=HXY9RJWTND

* Ex: QuerryParam(GET method)

/InvoiceAPI/InvoiceUtilsWS/getInvoiceFilePortal?supplierTaxCode=0100109106&invoiceNo=NO%2F17E0000017&fileType=zip&strIssueDate=20171227161438&reservationCode=LE3IMP8O5Y

**Output:**

The Response object describes the error state Webservice returns:

* Ex: The response result with FormParam
* Ex: The response result with XML

<?xml version="1.0" encoding="UTF-8" ?>

<invoiceFileOutput>

 <fileName>LE3IMP8O5Y-NO\_17E0000017</fileName>

 <fileToBytes>UEsDBBQACAgIAJV8m0sAAAAAAAAAAAAAAAALAAAAaW52b2ljZS54c2ztPVtvG9l5z1u</fileToBytes>

 <paymentStatus>true</paymentStatus>

</invoiceFileOutput>

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| fileToBytes | File content converted to bytes. Code convert to java file:**FileUtils.writeByteArrayToFile(newFile("D:/viettel/fileName.zip"), output.getFileToBytes());** |
| paymentStatus | Payment status |
| fileName | File name |

## Webservice gets converted invoice(pdf)

Allows the integrated system to obtain an electronic invoice conversion file. In case the invoice has been converted before, SInvoice will reload the old file without creating a new one.

**Note**: The electronic invoice system runs asynchronously, so the system pushes the invoice to the database after receiving the request to issue an invoice for about 1s. Therefore, when integrating, the request to get the invoice file should be made after 2-5 seconds after issuing the invoice

* **Input:**
* Action (POST): *InvoiceAPI/InvoiceWS/createExchangeInvoiceFile*
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/x-www-form-urlencoded

* Data: FormParam (POST method) or QueryParam (GET method) include parameters

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 11Format : [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| invoiceNo | Required : trueDataType: StringMinlength : 7Maxlength : 13Format : [a-zA-Z0-9/]+ | Invoice number (including invoice serial and invoice numbers).Ex: AA/16E0000001 |
| strIssueDate | Required : trueDataType: StringMinlength : Maxlength : Format: yyyyMMdd | Invoice date. |
| exchangeUser | Required : trueDataType: StringMinlength : 1Maxlength : 100 | Exchange user. |

* Data: FormParam.

**Body: supplierTaxCode=0100109106&invoiceNo=AC%2F18E0000039&strIssueDate=20180130094136&exchangeUser=%C4%90%E1%BA%B7ng%20T.T%20T%C3%A2m**

* Ex: QuerryParam (GET method):

*InvoiceAPI/InvoiceWS/createExchangeInvoiceFile*?supplierTaxCode=0100109106&invoiceNo=AA%2F17E0037914 &strIssueDate=20170907161438&exchangeUser=%C4%90%E1%BA%B7ng%20T.T%20T%C3%A2m

* **Output:**

The Response object describes the error state Webservice returns:

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| fileToBytes | File content converted to bytes. Code convert to java file:**FileUtils.writeByteArrayToFile(newFile("D:/viettel/fileName.pdf"), output.getFileToBytes());** |
| fileName | File’s name |

Response result.



## Webservice cancels invoice.

Allow deletion (transfer invoice to abandonment status) on SInvoice system, from integrated system.

* **Input:**
* Action (POST): InvoiceAPI/InvoiceWS/cancelTransactionInvoice
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/x-www-form-urlencoded

Data: FormParam (POST method) or QueryParam (GET method) include parameters

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 11Format : [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| invoiceNo | Required : trueDataType: StringMinlength : 7Maxlength : 13Format : [a-zA-Z0-9/]+ | Invoice number (including invoice serial and invoice numbers).Ex: AA/16E0000001 |
| strIssueDate | Required : trueDataType: StringMinlength : Maxlength : Format: yyyyMMddHHmmss(does not exceed the current date) | Invoice date. |
| additionalReferenceDesc | Required : trueDataType: StringMinlength : 1Maxlength : 100 | Name of the agreement to cancel the invoice. |
| additionalReferenceDate | Required : trueDataType: StringMinlength : Maxlength :Format: yyyyMMddHHmmss (does not exceed the current date) | Agreement date. |

The process updates the invoice that its status has been canceled in the database, and add information about the agreement.

Ex-Form Data:

supplierTaxCode=0100109106-997&invoiceNo=AB%2F17E0000325&strIssueDate=20171219081259&additionalReferenceDesc=hello&additionalReferenceDate=20171222081259

* **Output:**

The Response object describes the error state Webservice returns:

Succesful response example:

{

 "errorCode": null,

 "description": "CANCEL TRANSACTION INVOICE SUCCESS"

}

Error table:

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error code (value is null if get invoice successful). Check if the invoice is original, unreported tax, payment status, non-adjusted, replacing or adjusting invoices? If invalid, return the invoice information. |

## Webservice searchs invoice.

If the enterprise has a website to connect to Viettel’s S\_invoice webservice for searching invoice under some conditions provided by Viettel.

* **Input:**
* Action (POST): InvoiceAPI/InvoiceUtilsWS/getInvoices/{supplierTaxCode}
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json hoặc application/xml

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter type** | **Field name** | **Data type, constraint** | **Description** |
| PathParam | supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 15Format : [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation |
| JSon | GetInvoiceInput | Object | Object. |

* Data: JSON or XML
	+ GetInvoiceInput’s parameters:

|  |  |  |
| --- | --- | --- |
| Parameter name | Data type, constraint | Description |
| invoiceNo | Required : falseDataType: StringMinlength : 7Maxlength : 13Format : [a-zA-Z0-9/]+ | Invoice number. |
| startDate | Required : trueDataType: DateMinlength : Maxlength : 50Format : | Start date. |
| endDate | Required : trueDataType: DateMinlength : Maxlength : 50Format : | End date. |
| invoiceType | Required : falseDataType: StringMinlength : 6Maxlength : 6Format : [a-zA-Z0-9/]+ | Allow only these following values: 01GTKT, 02GTTT, 07KPTQ, 03XKNB, 04HGDL, 01BLP. Pursuant to the Decree No. 51/2010/NĐ-CP |
| rowPerPage | Required : trueDataType: NumberMinlength : Maxlength : 18 | Rows per page. |
| pageNum | Required : trueDataType: NumberMinlength : Maxlength : 18 | Page number. |
| buyerTaxCode | Required : falseDataType: LongMinlength : Maxlength : 15 | Buyer’s tax code. |
| buyerIdNo | Required : falseDataType: String | Buyer Id Number. |
| templateCode | Required : falseDataType: StringMinlength : 11Maxlength : 11 | Template code.  |
| invoiceSeri | Required : falseDataType: StringMinlength : 6Maxlength : 6Format : [a-zA-Z0-9/]+ | Invoice serials. |
| getAll | Required : falseDataType: BooleanMinlength: 1Maxlength: 1Format : true/false | Enables lookup invoice information of the entire enterprise for users of the parent company.Values are true / false |

Ex: with Json

{

 "startDate" : "2017-12-12T10:14:32.611+07:00",

 "endDate" : "2017-12-31T10:14:32.611+07:00",

 "invoiceType" : "02GTTT",

 "rowPerPage" : 20,

 "pageNum" : 1,

 "templateCode" : null

}

Ex : with XML

<?xml version="1.0" encoding="UTF-8" ?>

<getInvoiceInput>

 <startDate>2017-12-12T10:14:32.611+07:00</startDate>

 <endDate>2017-12-31T10:14:32.611+07:00</endDate>

 <invoiceType>02GTTT</invoiceType>

 <rowPerPage>20</rowPerPage>

 <pageNum>1</pageNum>

 <templateCode />

 <contractNo />

 <contractId />

 <buyerTaxCode />

 <invoiceSeri />

</getInvoiceInput>

* **Output:**

{

 "errorCode": null,

 "description": null,

 "totalRow": 286,

 "invoices": [

 {

 "invoiceId": 213469,

 "invoiceType": "02GTTT",

 "adjustmentType": "1",

 "templateCode": "02GTTT0/089",

 "invoiceSeri": "QT/17E",

 "invoiceNumber": "0000003",

 "invoiceNo": "QT/17E0000003",

 "currency": "VND",

 "total": 3800000,

 "issueDate": 1514281815000,

 "issueDateStr": null,

 "state": null,

 "requestDate": null,

 "description": null,

 "buyerIdNo": null,

 "stateCode": null,

 "subscriberNumber": null,

 "paymentStatus": 1,

 "viewStatus": 1,

 "downloadStatus": null,

 "exchangeStatus": null,

 "numOfExchange": null,

 "createTime": 1514281826000,

 "contractId": null,

 "contractNo": null,

 "supplierTaxCode": "0100109106",

 "buyerTaxCode": "6200000230",

 "totalBeforeTax": 3800000,

 "taxAmount": 0,

 "taxRate": null,

 "paymentMethod": null,

 "paymentTime": null,

 "customerId": null,

 "buyerName": "Trần Trung Dũng",

 "no": null,

 "paymentStatusName": null

 }

}

Or XML

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<invoicesOutput>

 <invoices>

 <adjustmentType>1</adjustmentType>

 <buyerName>Trần Trung Dũng</buyerName>

 <buyerTaxCode>6200000230</buyerTaxCode>

 <createTime>2017-12-26T16:50:26+07:00</createTime>

 <currency>VND</currency>

 <invoiceId>213469</invoiceId>

 <invoiceNo>QT/17E0000003</invoiceNo>

 <invoiceNumber>0000003</invoiceNumber>

 <invoiceSeri>QT/17E</invoiceSeri>

 <invoiceType>02GTTT</invoiceType>

 <issueDate>2017-12-26T16:50:15+07:00</issueDate>

 <paymentStatus>1</paymentStatus>

 <supplierTaxCode>0100109106</supplierTaxCode>

 <taxAmount>0</taxAmount>

 <templateCode>02GTTT0/089</templateCode>

 <total>3800000</total>

 <totalBeforeTax>3800000</totalBeforeTax>

 <viewStatus>1</viewStatus>

 </invoices>

</invoicesOutput>

Response object with HTTPStatus and output Entity.

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error code (value is null if get invoice successful). |
| List<InvoiceBean> | Valid record list. |

## Web service metadata

For each invoice form, there may be different dynamic field information (information fields other than static fields described in section 6). SInvoice allows integrated systems to retrieve dynamic field information for a specific invoice template that customers use.

* **Input:**
* Action (GET): [/InvoiceAPI/InvoiceWS/getCustomFields?taxCode=&templateCode](https://10.60.108.210:8273/InvoiceAPI/InvoiceWS/getCustomFields?taxCode=&templateCode)=
* Headers:

+ Authorization: username/pass

* Ex: /InvoiceAPI/InvoiceWS/getCustomFields?taxCode=0100109106&templateCode=01GTKT0%2f001
* Data: Query Param type include:

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| taxCode | Required : trueDataType: StringMinlength : Maxlength : 11Format : [a-zA-Z0-9/]+ | *Tax code.* |
| templateCode | Required : falseDataType: StringMinlength : Maxlength : 11Format : [a-zA-Z0-9/]+ | Template code - Pursuant to the Decree No. 51/2010/NĐ-CP**Note**: Invoice template with at least 1 notice issued in draft status can retrieve dynamic field list via API |

* **Output:**

Response object is a metadata list matching the enterprise’s template:

* Ex:

[{

 "id": 189,

 "invoiceTemplatePrototypeId": 1032,

 "keyLabel": "Năm sinh",

 "keyTag": "buyerDateOfBirth",

 "valueType": "date",

 "isRequired": false,

 "isSeller": false

}, {

 "id": 190,

 "invoiceTemplatePrototypeId": 1032,

 "keyLabel": "Mã bệnh nhân",

 "keyTag": "buyerCode",

 "valueType": "number",

 "isRequired": false,

 "isSeller": false

}, {

 "id": 191,

 "invoiceTemplatePrototypeId": 1032,

 "keyLabel": "Khoa phòng",

 "keyTag": "buyerDepartments",

 "valueType": "text",

 "isRequired": false,

 "isSeller": true

}, {

 "id": 192,

 "invoiceTemplatePrototypeId": 1032,

 "keyLabel": "Lý do thu",

 "keyTag": "invoiceReason",

 "valueType": "text",

 "isRequired": false,

 "isSeller": true

}]

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| id | DataType: Number | ID. |
| keyLabel | DataType: String | Key label is showed in website interface. |
| keyTag | DataType: String  | Key Tag what is saved in data (xml,db…) |
| valueType | DataType: String | Value type only allow: “text”, “date”, “number” |
| isRequired | DataType: Boolean | Required or not: |
| isSeller | DataType: Boolean | isSeller = true: belong to SellerisSeller = false: belong to Buyer |

**Data invoicing with metadata:**

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| invoiceCustomFieldId | Required : trueDataType: NumberMinlength : Maxlength : 10Format :  | ID. |
| keyTag | Required : trueDataType: String | Key Tag what is saved in data (xml,db…) |
| valueType | Required : trueDataType: String | Value type only allow: “text”, “date”, “number” |
| keyLabel | Required : trueDataType: String | Key label is showed in website interface. |
| dateValue | Required : falseDataType: Date | valueType = date |
| numberValue | Required : falseDataType: Number | valueType = number |
| stringValue | Required : falseDataType: String | valueType = text |

 **{**

 **"generalInvoiceInfo":{**

 **"invoiceType":"01GTKT",**

 **"templateCode":"01GTKT0/028",**

 **"invoiceIssuedDate":1505098310271,**

 **"currencyCode":"VND",**

 **"adjustmentType":"1",**

 **"paymentStatus":true,**

 **"paymentType":"TM",**

 **"paymentTypeName":"TM",**

 **"cusGetInvoiceRight":true,**

 **"buyerIdNo":"123456789",**

 **"buyerIdType":"1"**

 **},**

 **"buyerInfo":{**

 **"buyerName":"Lương Thị Huyền",**

 **"buyerLegalName":"",**

 **"buyerTaxCode":"",**

 **"buyerAddressLine":"HN VN",**

 **"buyerPhoneNumber":"09880830406",**

 **"buyerEmail":"",**

 **"buyerIdNo":"123456789",**

 **"buyerIdType":"1"**

 **},**

 **"sellerInfo":{**

 **"sellerLegalName":"Supplier perfom test 1",**

 **"sellerTaxCode":"0100109106-501",**

 **"sellerAddressLine":"test",**

 **"sellerPhoneNumber":"0123456789",**

 **"sellerEmail":"PerformanceTest1@viettel.com.vn",**

 **"sellerBankName":"vtbank",**

 **"sellerBankAccount":"23423424"**

 **},**

 **"extAttribute":[**

 **],**

 **"payments":[**

 **{**

 **"paymentMethodName":"TM"**

 **}**

 **],**

 **"deliveryInfo":{**

 **},**

 **"itemInfo":[**

 **{**

 **"lineNumber":1,**

 **"itemCode":"ENGLISH\_COURSE",**

 **"itemName":"Khóa học tiếng anh",**

 **"unitName":"khóa học",**

 **"unitPrice":3500000.0,**

 **"quantity":10.0,**

 **"itemTotalAmountWithoutTax":35000000,**

 **"taxPercentage":10.0,**

 **"taxAmount":0.0,**

 **"discount":0.0,**

 **"itemDiscount":150000.0**

 **}**

 **],**

 **"discountItemInfo":[**

 **],**

 **"summarizeInfo":{**

 **"sumOfTotalLineAmountWithoutTax":35000000,**

 **"totalAmountWithoutTax":35000000,**

 **"totalTaxAmount":3500000.0,**

 **"totalAmountWithTax":38500000,**

 **"totalAmountWithTaxInWords":"Ba mươi tám triệu năm trăm nghìn đồng chẵn",**

 **"discountAmount":0.0,**

 **"taxPercentage":10.0**

 **},**

 **"taxBreakdowns":[**

 **{**

 **"taxPercentage":10.0,**

 **"taxableAmount":35000000,**

 **"taxAmount":3500000.0**

 **}**

 **],**

 **"metadata": [**

 **{**

 **"invoiceCustomFieldId": 82,**

 **"keyTag": "buyerDateOfBirth",**

 **"dateValue": "1514019933737",**

 **"valueType": "date",**

 **"keyLabel": "Ngày sinh"**

 **},**

 **{**

 **"invoiceCustomFieldId": 83,**

 **"keyTag": "buyerCode",**

 **"numberValue": 12323,**

 **"valueType": "number",**

 **"keyLabel": "Mã bệnh nhân"**

 **},**

 **{**

 **"invoiceCustomFieldId": 84,**

 **"keyTag": "buyerDepartments",**

 **"stringValue": "Tim mach",**

 **"valueType": "text",**

 **"keyLabel": "Khoa phòng"**

 **},**

 **{**

 **"invoiceCustomFieldId": 85,**

 **"keyTag": "invoiceReason",**

 **"stringValue": "Khám bệnh",**

 **"valueType": "text",**

 **"keyLabel": "Lý do thu"**

 **}**

 **]**

**}**

## Webservice draft invoicing.

* **Input:**

Webservice shared in the case of original invoicing, invoicing for money adjustment, invoicing information adjustment and invoicing replacement.

* Action (POST): InvoiceAPI/InvoiceWS/createOrUpdateInvoiceDraft/{supplierTaxCode}
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json hoặc application/xml

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11 | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |

* Data: JSON or XML format
* Data transfer parameters are similar to section 6.2
* **Output:**

The Response object describes the error state Webservice returns and the Webservice data object returns:

* + - Invoice information

Json:

**{**

 "errorCode": ""**,**

 "description": ""**,**

 "result": **{**

 "supplierTaxCode": 1258694363**,**

 "invoiceNo": AA**/**16E0000001**,**

 "transactionID": 12523522245**,**

 "reservationCode": AXHBNK8I0H

 **}**

**}**

XML:

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>

<createInvoiceOutput>

 <result>

 <invoiceNo>BD/17E0000110</invoiceNo>

 <reservationCode>2M9U3PU638</reservationCode>

 <supplierTaxCode>0100109106</supplierTaxCode>

 <transactionID>1514296135756</transactionID>

 </result>

</createInvoiceOutput>

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>

<createInvoiceOutput>

 <description>Phải chọn loại template hóa đơn</description>

 <errorCode>TEMPLATE\_NOT\_FOUND</errorCode>

 </createInvoiceOutput>

Description

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |

## Webservice batch invoicing.

In case customers want to invoice in batches, they will use the following function.

**Note**: The system is allowing up to 50 invoices / 1 lot because of the long processing time for each invoice, if too many batches can be timeout. In the case of more integrated data from the system, it is possible to automatically split the number of invoices and send them

* **Input:**
* Action (POST): InvoiceAPI/InvoiceWS/createBatchInvoice/{supplierTaxCode}
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json hoặc application/xml

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11 | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |

* Data: Json or Xml type.
* Sample data

|  |  |
| --- | --- |
| JSON | XML |
|  |  |

* Successful result:



## Webservice updates Tax declaration.

Allows the integrated system to send updated tax declaration information, to prevent customers from making mistakes in the use process (actual declared invoices can still be deleted and replaced)

* **Input:**
* Action (POST): *InvoiceAPI/InvoiceUtilsWS/updateTaxDeclaration/*
* Headers:
* + Authorization: username/pass
* + Content-Type: application/json (application/xml)

Include:

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11Format:  | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| strIssueDate | Required: trueDataType: StringMinlength: Maxlength: Format: dd/mm/yyyy | Invoice date.  |

* Ex - json:

 **{**

 **"supplierTaxCode":"0100109106",**

 **"strIssueDate":"14/03/2018"**

 **}**

* Ex - xml:

**<?xml version="1.0" encoding="UTF-8" ?>**

**<commonDataInput>**

 **<supplierTaxCode>0100109106</supplierTaxCode>**

 **<strIssueDate>14/03/2018</strIssueDate>**

**</commonDataInput>**

* **Output:**

Successful result:



## Webservice provides using invoice status

Returns details of the number of invoices used, the remaining number of an invoice range from which the integration partner can proactively alert customers in case of insufficient invoices.

* **Input:**
* Action (POST): [/InvoiceAPI/](https://10.60.108.210:8273/InvoiceAPI/InvoiceWS/createBatchInvoice/0100109106)InvoiceUtilsWS/getProvidesStatusUsingInvoice
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json hoặc application/xml

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 15Format : [a-zA-Z0-9/]+ | Supplier’s tax code |
| templateCode | Required : trueDataType: StringMinlength : 11Maxlength : 11Format : [a-zA-Z0-9]{7}/[0-9]{3} | Invoice code. |
| serial | Required : trueDataType: StringMinlength : 6Maxlength : 6Format : [a-zA-Z0-9/]+ | Invoice serial. |

Notice: Need one of these information to know invoice using status:

* + - supplierTaxCode: Enterprise tax code.
		- pattern: invoice code.
		- serial: Invoice serial.

Example:

* JSON:

{

 "supplierTaxCode":"0100109106",

 "templateCode":"01GTKT0/003",

 "serial":"AA/18E"

}

* XML:

**<?xml version="1.0" encoding="UTF-8" ?>**

**<commonDataInput>**

 **<supplierTaxCode>0100109106</supplierTaxCode>**

 **< templateCode >01GTKT0/003</ templateCode >**

 **<serial>AA/17E</serial>**

**</commonDataInput>**

* **Output:**

Response object with HTTPStatus and output Entity.

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| status | Status (200 if get invoice successful) |
| numOfpublishInv | The number of public invoice. |
| totalInv | Total invoice |

## Webservice gets invoice list in period.

Returns the details of invoices so that you can check whether the invoice was wrong for a period of time

* **Input:**
* Action (POST): [/InvoiceAPI/](https://10.60.108.210:8273/InvoiceAPI/InvoiceWS/createBatchInvoice/0100109106)InvoiceUtilsWS/getListInvoiceDataControl
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json hoặc application/xml

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 15Format : [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| fromDate | Required : trueDataType: StringFormat : dd/MM/yyyy | Start date.  |
| toDate | Required : trueDataType: StringFormat : dd/MM/yyyy | End date. |

Example:

* JSON:

{

 "supplierTaxCode":"0100109106",

 "fromDate":"10/03/2018",

 "toDate":"16/03/2018"

}

* XML:

**<?xml version="1.0" encoding="UTF-8" ?>**

**<commonDataInput>**

 **<supplierTaxCode>0100109106</supplierTaxCode>**

 **<** **fromDate>** **10/03/2018</fromDate >**

 **<** **toDate>** **16/03/2018</toDate >**

**</commonDataInput>**

* **Output:**

Response object with HTTPStatus and output Entity.

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| lstInvoiceBO | Invoice list result. |

## Webservice sends email to customer.

In case the customer has configured the email on SInvoice system, the system will automatically send email to the buyer when there is email in the invoice information. The webservice allows integrated software to proactively send emails to customers, in case the email configuration is not working.

* **Input:**
* Action (POST): [/InvoiceAPI/](https://10.60.108.210:8273/InvoiceAPI/InvoiceWS/createBatchInvoice/0100109106)InvoiceUtilsWS/sendHtmlMailProcess
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json hoặc application/xml

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| supplierTaxCode | Required : trueDataType: StringMinlength : Maxlength : 15Format : [a-zA-Z0-9/]+ | Supplier’s tax code |
| lstTransactionUuid | Required : trueDataType: String | Key request list. |

Example:

* JSON:

{

 "supplierTaxCode":"0100109106",

 "lstTransactionUuid":"idtest9999999999,testuuid8888888,transactionUuid123"

}

* XML:

**<?xml version="1.0" encoding="UTF-8" ?>**

**<commonDataInput>**

 **<supplierTaxCode>0100109106</supplierTaxCode>**

 **<**lstTransactionUuid**>**idtest9999999999,testuuid8888888,transactionUuid123**</**lstTransactionUuid**>**

**</commonDataInput>**

* **Ouput:**

 Response object with HTTPStatus and output Entity.

|  |  |
| --- | --- |
| **Field name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |

## Webservice invoicing signing with USB token

Generate xml file and hash string of the XML file of invoice signed by USB Token

* **Input:**
* Action (POST): InvoiceAPI/InvoiceWS/createInvoiceUsbTokenGetHash/{supplierTaxCode}
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| certificateSerial | trueDataType: StringMinlength : 32 Maxlength : 32Format : [a-zA-Z0-9]+ | Used when invoicing using a USB Token.Serial Number of the enterprise's digital certificate, this digital certificate has been pushed up on the system by the enterprise when registering to use USB Token.Hex formatEx: 5404FFFEB7033FB316D672201B7BA4FE |

* **{**
* **"generalInvoiceInfo":{**
* **"invoiceType":"01GTKT",**
* **"templateCode":"01GTKT0/170",**
* **"invoiceSeries":"AA/17E",**
* **"transactionUuid": "123e4567-e89b-12d3-a456-426655440000",**
* **"invoiceIssuedDate":1517301625626,**
* **"currencyCode":"VND",**
* **"adjustmentType":"1",**
* **"paymentStatus":true,**
* **"paymentType":"TM",**
* **"paymentTypeName":"TM",**
* **"cusGetInvoiceRight":true,**
* **"userName":"user 1",**
* **“certificateSerial”:”5404FFFEB7033FB316D672201B7BA4FE”**
* **},**
* **"buyerInfo":{**
* **"buyerName":"Đặng thị thanh tâm",**
* **"buyerLegalName":"",**
* **"buyerTaxCode":"",**
* **"buyerAddressLine":"HN VN",**
* **"buyerPhoneNumber":"11111",**
* **"buyerEmail":"",**
* **"buyerIdNo":"123456789",**
* **"buyerIdType":"1"**
* **},**
* **"sellerInfo":{**
* **"sellerLegalName":"Đặng thị thanh tâm",**
* **"sellerTaxCode":"0100109106-501",**
* **"sellerAddressLine":"test",**
* **"sellerPhoneNumber":"0123456789",**
* **"sellerEmail":"PerformanceTest1@viettel.com.vn",**
* **"sellerBankName":"vtbank",**
* **"sellerBankAccount":"23423424"**
* **},**
* **"extAttribute":[**
* **],**
* **"payments":[**
* **{**
* **"paymentMethodName":"TM"**
* **}**
* **],**
* **"deliveryInfo":{**
* **},**
* **"itemInfo":[**
* **{**
* **"lineNumber":1,**
* **"itemCode":"ENGLISH\_COURSE",**
* **"itemName":"Khóa học tiếng anh",**
* **"unitName":"khóa học",**
* **"unitPrice":3500000.0,**
* **"quantity":10.0,**
* **"itemTotalAmountWithoutTax":35000000,**
* **"taxPercentage":10.0,**
* **"taxAmount":0.0,**
* **"discount":0.0,**
* **"itemDiscount":150000.0**
* **}**
* **],**
* **"discountItemInfo":[**
* **],**
* **"metadata":[**
* **],**
* "**meterReading": [{**
* **"previousIndex": "5454",**
* **"currentIndex": "244",**
* **"factor": "22",**
* **"amount": "2"**
* **},**
* **{**
* **"previousIndex": "44",**
* **"currentIndex": "44",**
* **"factor": "33",**
* **"amount": "3"**
* **}],**
* **"summarizeInfo":{**
* **"sumOfTotalLineAmountWithoutTax":35000000,**
* **"totalAmountWithoutTax":35000000,**
* **"totalTaxAmount":3500000.0,**
* **"totalAmountWithTax":38500000,**
* **"totalAmountWithTaxInWords":"Ba mươi tám triệu năm trăm nghìn đồng chẵn",**
* **"discountAmount":0.0,**
* **"settlementDiscountAmount":0.0,**
* **"taxPercentage":10.0**
* **},**
* **"taxBreakdowns":[**
* **{**
* **"taxPercentage":10.0,**
* **"taxableAmount":35000000,**
* **"taxAmount":3500000.0**
* **}**
* **]**
* **}**
	+ - Hash result:

**{**

 "errorCode": ""**,**

 "description": ""**,**

 "result": **{**

 "hashString": 0HFm34vX525V3Syg5EwdTnfO21s=**,** **}**

**}**

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| errorCode | DataType: String | Error code. |
| description | DataType: String | Error description. |
| hashString | DataType: String  | Hash result, base64 format. |

## Webservice inserts signature to USB token

Push the signature after signing the hash string returned in step 6.15 into the invoice file.

* **Input:**
* Action (POST): InvoiceAPI/InvoiceWS/createInvoiceUsbTokenInsertSignature
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/json

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| supplierTaxCode | Required : trueDataType: StringMinlength : 10 Maxlength : 15Format : [0-9-]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| templateCode | Required : trueDataType: StringMinlength : 11Maxlength : 11 | Template code.  |
| hashString | Required : trueDataType: String | Hash result in 6.15 |
| signature | Required : trueDataType: String | Signature was signed by USB token. Base64 format. |

Results:

* + - Data

**{**

 "errorCode": ""**,**

 "description": ""**,**

 "result": **{**

 "supplierTaxCode": 1258694363**,**

 "invoiceNo": AA**/**16E0000001**,**

 "transactionID": 12523522245**,**

 "reservationCode": AXHBNK8I0H

 **}**

**}**

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| supplierTaxCode | Seller tax code |
| invoiceNo | Invoice number.  |
| transactionID | Transaction id. |
| reservationCode | Reservation code. |

## Convert font

Support converting fonts to Unicode font

* **Input:**
* Action (POST): InvoiceAPI/InvoiceUtilsWS/convertFont
* Headers:

+ Authorization: username/pass

+ Content-Type : application/json

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| font | Required : trueDataType: String | Data fonts, supporting data include:VNITCVN3TCVN1 |
| data | Required : trueDataType: String | The data needs to be converted to font  |

Results:

* + - Data

**{**

 **"errorCode": "",**

 **"description": "",**

 **"result": ""**

**}**

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| result | Data is converted |

## Update payment status

Allows the integrated system to update the payment status of an invoice to paid

* **Input:**
* Action (POST): InvoiceAPI/InvoiceWS/updatePaymentStatus
* Headers:

+ Authorization: username/pass

+ Content-Type : application/x-www-form-urlencoded

|  |  |  |
| --- | --- | --- |
| Parameters | **Data type, constraint** | Description |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11Format: [a-zA-Z0-9/]+ | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| **templateCode** | Required: trueDataType: StringMinlength: 11Maxlength: 11Format: [a-zA-Z0-9/]+ | Invoice template code. Pursuant to the Decree No.51/2010/NĐ-CP Ex: 01GTKT0/001 |
| invoiceNo | Required: trueDataType: StringMinlength: 7Maxlength: 13Format: [a-zA-Z0-9/]+ | Invoice number (including invoice serial and invoice numbers)Ex: AA/16E0000001 |
| buyerEmailAddress | Required: falseDataType: StringMinlength: Maxlength: 50Format: ^[\_A-Za-z0-9-\+]+(\.[\_A-Za-z0-9-]+)\*@[A-Za-z0-9-]+(\.[A-Za-z0-9]+)\*(\.[A-Za-z]{2,})$ | Buyer email, used to send invoice to buyerIf there are multiple emails, separated by semicolons (;). |
| strIssueDate | Required: trueDataType: StringMinlength: Maxlength: Format: yyyyMMddHHmmss | Invoice date |
| paymentType | Required: trueDataType: StringMinlength: Maxlength: 30Format: [a-zA-Z0-9-\_./]+ | Type of payment type |
| paymentTypeName | Required: trueDataType: StringMinlength: Maxlength: 100Format: | Name of form of payment |
| cusGetInvoiceRight | Required: trueDataType: BooleanMinlength: Maxlength: 1Format: | Show customers the invoice in Invoice Management |

* Data:

**supplierTaxCode=0100109106&templateCode=01GTKT0%2F360&invoiceNo=AB%2F18E0000035&buyerEmailAddress=tamdtt1%40viettel.com.vn&strIssueDate=20180803000000&paymentType=TM%2FCK&paymentTypeName=TM%2FCK&cusGetInvoiceRight=true**

**Output:**

**{"errorCode":null,"description":null,"result":true,"paymentTime":null,"paymentMethod":null}**

Description

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| result | Results of payment status updatesSuccess: trueFailed: false |
| paymentTime | Time to update payment status |
| paymentMethod | Payment methods |

## Cancel payment status

Allow to change the payment status of an invoice to unpaid

* **Input:**
* Action (POST): InvoiceAPI/InvoiceWS/cancelPaymentStatus
* Headers:

+ Authorization: username/pass như đăng nhập trên web

+ Content-Type : application/x-www-form-urlencoded

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11 | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| invoiceNo | Required : trueDataType: StringMinlength : 7Maxlength : 13Format : [a-zA-Z0-9/]+ |  |
| strIssueDate | Required : trueDataType: StringMinlength : Maxlength : Format:yyyyMMddHHmmss |  |

* Data:

**supplierTaxCode=0100109106&invoiceNo=AB%2F19E0000196&strIssueDate=20191016144100**

**Output:**

**{"errorCode":null,"description":null,"result":true,"paymentTime":null,"paymentMethod":null}**

Description

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| errorCode | Error code (value is null if successful invoicing) |
| description | Error description (value is null if successful invoicing) |
| result | Results of payment status updatesSuccess: trueFailed: false |
| paymentTime | Time to update payment status |
| paymentMethod | Payment methods |

## Preview draft invoice

The webservice is used to retrieve a PDF file of data to view. The integrated system pushes the billing data to SInvoice and returns PDF file of that data, the data will not be saved into SInvoice.

* **Input:**
* Action (POST): InvoiceAPI/InvoiceUtilsWS/createInvoiceDraftPreview/{supplierTaxCode}
* Headers:

+ Authorization: username/pass

+ Content-Type : application/json hoặc application/xml

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11 | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |

* Data: Similar to invoicing
* **Output:**

|  |  |
| --- | --- |
| **Field name**  | **Description** |
| errorCode | Error code |
| description | Description |
| fileName | File’s name |
| fileToBytes | File content converted to bytes. |

## Find invoices by transactionUuid

Allows the integrated system to look up invoices that have been issued successfully based on transactionUuid (The data that uniquely identifies an invoice is generated and controlled by the integrated software)

* **Input:**
* Action (POST): *InvoiceAPI/InvoiceWS/searchInvoiceByTransactionUuid*
* Headers:

+ Authorization: username/pass

+ Content-Type : application/x-www-form-urlencoded

|  |  |  |
| --- | --- | --- |
| **Field name** | **Data type, constraint** | **Description** |
| supplierTaxCode | Required: trueDataType: StringMinlength: Maxlength: 11Format:  | Seller’s tax code, Provided by General Department of Taxation. Ex 1: 0312770607Ex 2: 0312770607-001 |
| transactionUuid | Required: trueDataType: StringMinlength: 10Maxlength: 36Format:  | The transactionUuid value assigned to the invoice when sending the billing data |

* Data: Similar

**supplierTaxCode=0100109106&transactionUuid=** **5a9b3b68-b5a3-4670-bd38-764cbe2685b5**

* **Output:**



List of system error returns

The Response object describes the error state returned by the Webservice and the returned webservice data object. Include error code and error description. A list of common error codes and a list of all system error codes is attached



**Note**: When an error occurs, first check the error code in the error list to understand why the error is and how to fix it

Mapping between information fields and invoice forms

The information fields will be mapped on the invoice template depending on the detailed design of the invoice template. Basically, invoice patterns will be mapped fields as follows:

**Note**: in case the information field is not displayed correctly, the cause may be the incorrect data sent or the invoice form does not display the information correctly. Check that the data in the original invoice file (xml) downloaded is correct

